


MCOB21605C1V-EBP	2 x 16	Euro/Jap/Cyrillic	OLED Module
Specification			
Version: 1		Date: 16/05/2017	
Revision			

Display Features					
Character Count	2 x 16			Box Quantity	Weight / Display
Appearance	Blue on Black				
Logic Voltage	5V				
Interface	Parallel				
Font Set	English / European / Cyrillic				
Character Height	5.55 mm				
Module Size	85.00 x 30.00 x 10.00 mm				
Operating Temperature	-40°C ~ +80°C				
Construction	COB				
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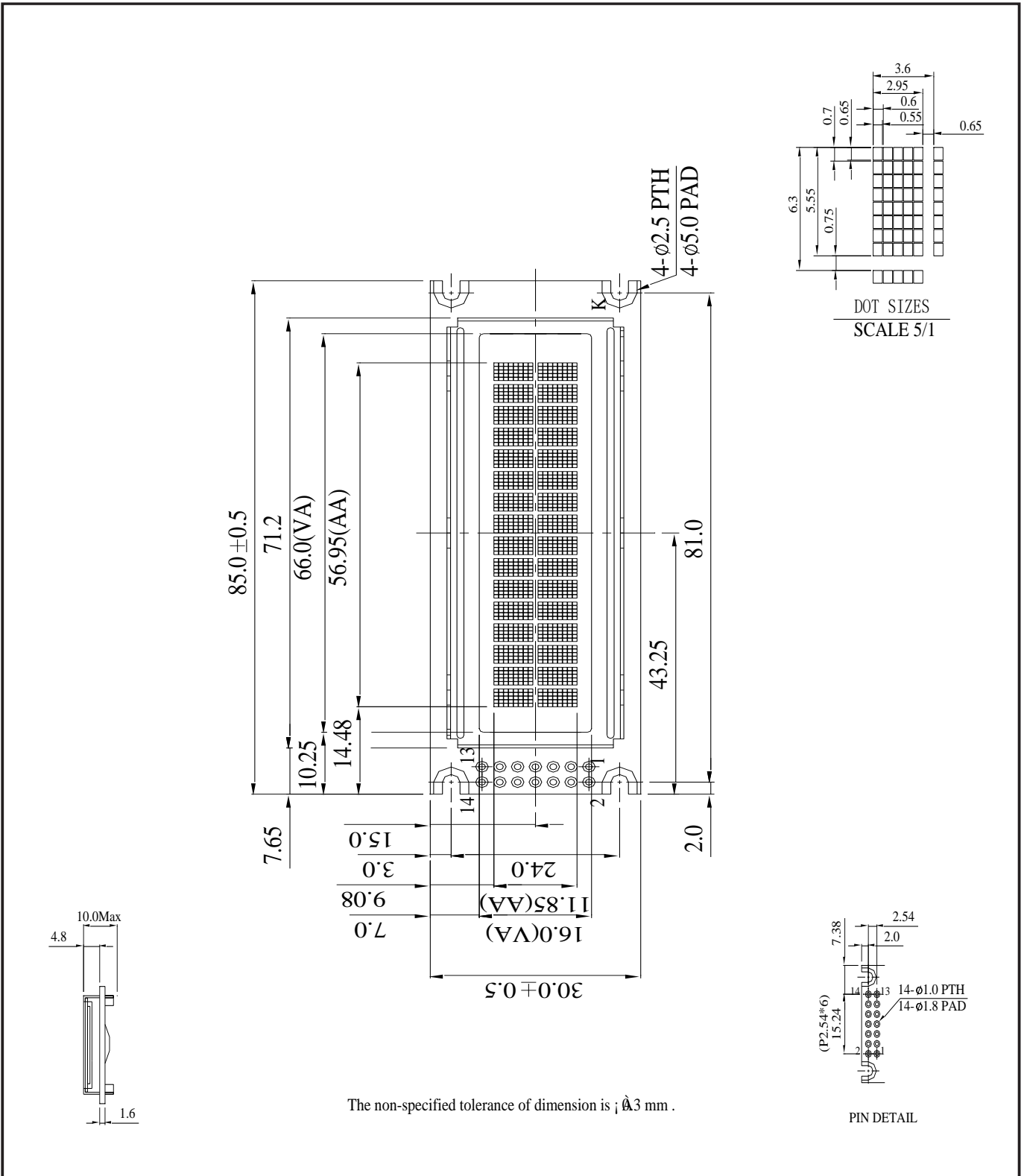
* - For full design functionality, please use this specification in conjunction with the MS0010 specification. (Provided Separately)

Display Accessories	
Part Number	Description

Optional Variants	
Appearance	Voltage
White on Black	
Yellow on Black	
Green on Black	
Red on Black	

Mechanical Specifications

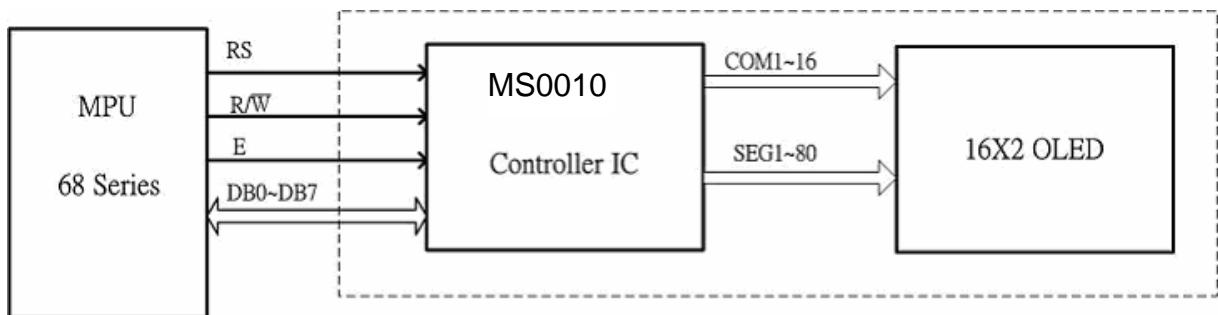
Module Size	85.00 x 30.00 x 10.00 (With Backlight)				W x H x D mm
Viewing Area	66.00 x 16.00	W x H mm	Hole-to-Hole	81.00 x 24.00	W x H mm
Character Size	2.95 x 5.55	W x H mm	Character Pitch	3.60 x 6.30	W x H mm
Dot Size	0.55 x 0.65	W x H mm	Dot Pitch	0.60 x 0.70	W x H mm



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Pin layout

Pin	Symbol	Description	Remarks
1	VDD	Supply Voltage for Logic	5V
2	VSS	Ground	
3	NC	No Connection	
4	RS	H: Data L: Instruction Code	H/L
5	R/W	H: Read(MPU-->Module) L: Write(MPU-->Module)	H/L
6	E	Chip Enable Signal	H, H -->L
7	DB0	Data Bus Line	H/L
8	DB1	Data Bus Line	H/L
9	DB2	Data Bus Line	H/L
10	DB3	Data Bus Line	H/L
11	DB4	Data Bus Line	H/L
12	DB5	Data Bus Line	H/L
13	DB6	Data Bus Line	H/L
14	DB7	Data Bus Line	H/L



Address Format	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0
CA (Character Address)	1	ADD6	ADD5	ADD4	ADD3	ADD2	ADD1	ADD0

1	2	3	4	.....	.....	13	14	15	16
CA10000000	CA10000001	CA10000010	CA10000011	.....	.....	CA10001100	CA10001101	CA10001110	CA10001111
CA11000000	CA11000001	CA11000010	CA11000011	CA11001100	CA11001101	CA11001110	CA11001111

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Font Map

Upper 4bit Lower 4bit	LLLL	LLLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL	CG RAM (1)															
LLLH	(2)															
LLHL	(3)															
LLHH	(4)															
LHLL	(5)															
LHLH	(6)															
LHHL	(7)															
LHHH	(8)															
HLLL	(1)															
HLLH	(2)															
HLHL	(3)															
HLHH	(4)															
HHLL	(5)															
HHLH	(6)															
HHHL	(7)															
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Upper 4bit Lower 4bit	LLLL	LLLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL	CG RAM (1)															
LLLH	(2)															
LLHL	(3)															
LLHH	(4)															
LHLL	(5)															
LHLH	(6)															
LHHL	(7)															
LHHH	(8)															
HLLL	(1)															
HLLH	(2)															
HLHL	(3)															
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Upper 4bit Lower 4bit	LLLL	LLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL	CG RAM (1)															
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Absolute Maximums Ratings

Item	Symbol	Minimum	Typical	Maximum	Unit
Supply Voltage for Logic	V0	-0.30	---	5.30	V
Operating Temperature	Vopr	-40	---	80	°C
Storage Temperature	Vstg	-40	---	80	°C

Electronic Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Input High Voltage	VIH	---	0.80	---	VDD	V
Input Low Voltage	VIL	---	GND	---	0.20	V
Output High Voltage	VOH	IOH=-0.5mA	0.80	---	VDD	V
Output Low Voltage	VOL	IOL=0.5mA	GND	---	0.20	V
Supply Voltage for Logic	VDD~VSS	---	4.80	5.00	5.30	V
50% Checkboard Operating Current.	IDD	VDD=5V	30	35	42	mA

OLED Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Viewing Angle	(V)θ	---	160	---	---	Deg
	(H)φ	---	160	---	---	Deg
Contrast Ratio	CR	Dark	2000:1	---	---	---
Response Time	T Rise	---	---	10	---	μs
	T Fall	---	---	10	---	μs
Display with 50% Checkboard Brightness			60	70	---	cd/m ²
CIEx(Blue)		(CIE1931)	0.12	0.16	0.20	---
CIEy(Blue)		(CIE1931)	0.19	0.23	0.27	---

OLED Life Time

Item	Conditions	Typical	Remark
Operating Life Time	Ta=25°C. Initial checkboard brightness, 50%.	50,000 Hours	---

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